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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

| | |
|---|---|
| In Re<br><br>ACACIA MEDIA TECHNOLOGIES CORPORATION | Case No. C-05-0114JW<br><br>**ROUND 3 DEFENDANTS' SUBMISSION IDENTIFYING THE ESSENTIAL COMPONENTS OF THE PATENTEE-DEFINED "TRANSMISSION SYSTEM" AND "RECEIVING SYSTEM"**<br><br>Date: ____, 2007<br>Time:<br>Courtroom: Honorable James Ware |

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## PRELIMINARY STATEMENT

The Court confirmed in the Fifth Claim Construction Order ("5th CCO") that the claim term "'transmission system' means the patented apparatus described in the specification, including its inherent interoperability." (5th CCO at 9.) Nonetheless, the Court vacated its previous construction of transmission system because, *inter alia*, that construction did not include all of the essential components of a transmission system:

> The Third Claim Construction Order's definition of "transmission system" includes an enumeration of components determined by the Court to be essential. The Court now finds that there are additional components which are essential, depending upon the steps of a particular claim. (*Id*. at 12.)

The Court invited the parties to submit a memorandum enumerating which "additional components" are essential on a claim-by-claim basis,[1] "tak[ing] into consideration cooperative relationships, optional components and the steps of each claim." (*Id*. at 12-13.) The Court similarly invited the parties to address the essential features of a "receiving system." (*Id*. at 18.) Using these submissions, the Court intends to modify its construction of the phrases "transmission system" and "receiving system" by adding the additional components that are necessary for each different claim. *(Id.*)

This memorandum is the Round 3 defendants' submission.

---

[1] Although the Court suggests that briefing is required only with respect to claims 19 and 41 of the '992 patent, we provide the analysis the Court requested for all of the asserted claims of the '992, '275 and '863 patents because they all contain method steps performed by, on or with a "transmission system." (3rd CCO at 5, 29, 34-35, 37; 4th CCO at 5-6; *See also* 7/21/06 Stipulation of the parties (Docket No. 187).)

## I) TRANSMISSION SYSTEM

The Court's 5th CCO "affirms its previous finding that the inventors gave a specialized meaning to the phrase 'transmission system.'" (5th CCO at 6.) Specifically:

> the Court has determined that the phrase "transmission system" was coined by the inventors to describe a system which stores physical items, extracts information from those items, encodes the information, processes and categorizes it and then stores the information in a form and location accessible to users. In addition, upon request from a user, the "transmission system" transmits information to a remote "receiving system" selected by a user. Thus, the Court has determined that "transmission system" must be construed in a way which recognizes its multiple features and functions. (*Id.*)

The interconnected components which perform these essential functions constitute the basic transmission system identified by the patentees. The specification does not describe any "transmission system" other than one which contains each of the essential components connected in order as explained below. These interconnected components are inherent in the patentee's use of the term "transmission system," and are required by all method claims which call for steps to be performed on, with or by a transmission system. This basic transmission system is depicted in Figure A below:

BASIC PATENTEE-DEFINED "TRANSMISSION SYSTEM"

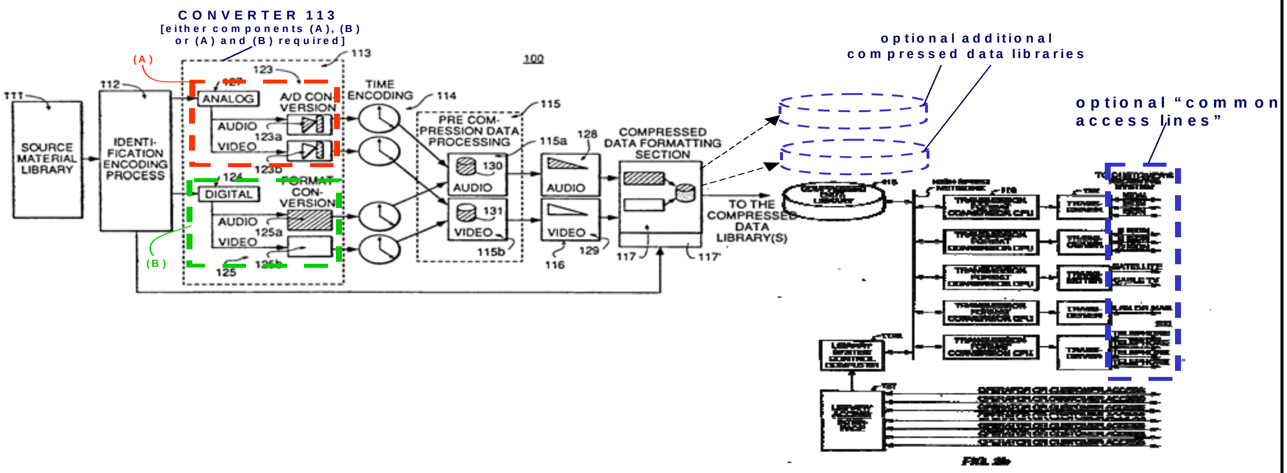

CONVERTER 113
[either components (A), (B) or (A) and (B) required]
(A)
(B)
optional additional compressed data libraries
optional "common access lines"
SOURCE MATERIAL LIBRARY
IDENTIFICATION ENCODING PROCESS
ANALOG
AUDIO
VIDEO
A/D CONVERSION
DIGITAL
FORMAT CONVERSION
TIME ENCODING
PRE COMPRESSION DATA PROCESSING
COMPRESSED DATA FORMATTING SECTION
TO THE COMPRESSED DATA LIBRARY(S)
100

FIGURE A

Each component of this basic transmission system is separately described in Section (I)(A) *infra*.[2] For the reasons explained, each component is not only essential, each must be interconnected to other components exactly as depicted or the system will not work. However, three of the essential components, converter 113, compressed data library 118 and (unnumbered) "common access lines" emanating from transceiver 122, have optional implementations. These optional implementations of specific essential components are explained in Section (I)(A) as well.

Appendix A contains the claim charts requested by the Court. These charts identify all of the components of the patentee-defined "transmission system" which are required for each method step performed on, with or by a transmission system. As the Court observed, the construction of "transmission system" for a specific claim could be more limited than the basic transmission system depicted above if a specific claim is limited to a specific one of the optional implementations for converter 113, compressed data library 118 or common access lines. Having now completed the charts and the analysis, we have determined that only certain dependent claims further limit the construction of "transmission system" beyond the basic transmission system.

---

[2] Nothing in this memorandum, including our identification of components in the charts attached as Appendix A and B, suggests or implies that the patentee-defined and claimed "transmission system" or "receiving system," or any of their components, satisfy the requirements of 35 U.S.C. § 112. In fact, they do not. The claims lack written description, are not enabled and are indefinite. In some cases, the disclosure is so lacking that it is not even possible to identify a component in the transmission system or receiving system that corresponds to a method step required to be performed by, on or with a transmission system or receiving system. Appropriate motions will be made during the period for such motions as directed by the Court.

The charts of Appendix A also identify the components of the "transmission system" required for each method step performed by or at a "central processing location." These claim terms also require the use of a "transmission system." (*See* 4th CCO at 6 and 20.)

Finally, Section (I)(B) contains the construction of "transmission system" for each of the asserted claims.

### A) Essential Interconnected Components of the Patentee-Defined "transmission system"

Each of the essential components of a "transmission system" depicted above in Figure A is addressed in turn below:

**(i) "source material library" 111**

All of the information processed, stored and transmitted by the "transmission system" originates from physical items stored in a source material library. (6:10-19.)[3] As the Court stated, "'transmission system' was coined by the inventors to describe a system which stores physical items..." (5th CCO at 6.) As such, the source material library is the essential first component of every transmission system. There is no disclosure of a transmission system without a source material library.

This essential nature of the source material library is confirmed repeatedly throughout the specification and the prosecution history:

> **The entire system includes a transmission system** and a reception system. **The transmission system includes a source material library** from which a user makes a selection. The selected program is processed and compressed for storage in a

[3] All citations herein to the common specification of the Yurt patents are to the '992 patent.

> compressed data library. [Petition to Make Special at 2-3 (Benyacar 05/08/2006 Decl., Exh. B, Docket No. 161-3)] (emphasis added.)
>
> **[T]he present invention comprises** a receiving system responsive to a user input identifying a choice of an item stored in a **source material library**. . . (2:62-64) (emphasis added.)
>
> **Lang does not disclose a system** with one or more libraries **wherein a plurality of system subscribers may access information stored in the film and tape library** or libraries, and play back the selected information at a time and place selected by the subscriber. (1:51-56) (emphasis added.)
>
> **Lang does not teach** that user requests will cause items stored in **a source material library** to be sent from a transmitter to a receiving system. [Petition to Make Special at 7 (Benyacar 05/08/2006 Decl., Exh. B, Docket No. 161-3)] (emphasis added.)
>
> Lang "envisions" a [source material] library at some time in the future . . . Applicants submit that the incorporation of a [source material] library into the system in Lang is only envisioned because of a lack of knowledge of how to incorporate such a library. Applicants, however, have solved the problems left open in Lang. [10/01/1991 Amendment at 19 (Benyacar 08/08/2006 Decl., Exh. E, Docket No. 161-6.)]
>
> [T]he first step of the distribution method **400** involves retrieving the information for selected items in the **source material library 111**, upon a request by a user of the distribution system (step **412**). (18:53-56) (emphasis added.)

**(ii) "identification encoder" 112**

The component directly connected to the source material library in the patentees' coined "transmission system" is the identification encoder 112. The identification encoder is an essential component of every transmission system because, *inter alia*, the assignment of identification codes is mandatory:

> Prior to being made accessible to a user of the transmission and receiving system of the present invention, the item **must** be . . . given a unique identification code by identification encoder **112** (6:35-39) (emphasis added.)

It is essential not just that the "transmission system" include an identification encoder, but that the identification encoder be directly connected to the source material library, because it is the identification encoder which retrieves the information from the items which are stored in the source material library:

> . . . **identification encoding means for retrieving the information for the items from the source material library means** and for assigning a unique identification code to the retrieved information (2:30-33) (emphasis added.)
>
> . . . the Examiner argues that . . . Lang discloses the recited identification encoding means. This cannot be because **the functions of the identification encoding means are to retrieve of [sic] information from the source material library means** and to assign a unique identification code to the retrieved information. The referenced section of Lang performs neither function. [10/01/1991 Amendment at 19-20 (Benyacar 08/08/2006 Decl., Exh. E, Docket No. 161-6.)]

Finally, "[i]n some cases, such as inter-library transfers, incoming materials may be in a previously compressed form . . . In such a case, retrieved items are passed directly from identification encoder **112** to compressed data formatter **117**." (7:44-50.) Because the specification is clear that at most this will only occur in "some" cases, components 113-116 are necessary components of every transmission system because at least "some" incoming materials will necessarily have to be processed prior to storage. Moreover, when information has been previously compressed, it must be passed directly to the compressed data formatter 117, as neither the time encoder 114 nor the compression means 115/116 are capable of processing such previously-compressed information. The identification encoder must therefore also have the ability to pass information directly to the compressed data formatter 117.

**(iii) "converter" 113**

The information retrieved from the source material library by the identification encoder can be in many different formats. The function of converter 113 is to place the information into a single "predetermined format" (referred to as "formatted data") which will be recognized by all of the components which subsequently process the information.[4] For example, both the time encoder 114 and compression means 115/116 are described only as operating on "formatted data."[5] (2:36-41; 7:64-8:1; 8:57-9:2; 19:3-4; 19:5-7.) Because the converter 113 converts information retrieved from the source material library by the identification encoder, it must be placed after the identification encoder. Furthermore, because the converter 113 converts the retrieved information into the predetermined format used by all of the remaining components in the transmission system, it must be placed before all the remaining components. Therefore, the converter must be placed immediately after the identification encoder and before any of the remaining components of the transmission system, exactly as is shown in figure 2.

---

[4] If the information retrieved from the source material library is in digital form, converter 123 converts the signal "to a *proper* voltage" and "sets the *correct* bit rates and encodes into least significant bit (lsb) first pulse code modulated (pcm) data" (7:1-6 ) (emphasis added.) When the information retrieved from the source material library by the identification encoder is in analog form, the converter 123 first converts it to digital form, and then performs the same processing as is performed on information retrieved from the source material library in digital form (7:12-18.) Thus, irrespective of the type or format of the information which enters the converter, the output of the converter is in a single, predetermined format.

[5] Although the specification states that "[t]he data arriving from time encoder **114** may be at various frame rates and of various formats" (8:62-64), the paragraph beginning at 8:67 teaches that "format" here refers to aspect ratio and frame rates, not the "predetermined format" of the data.

Converter 113 is also responsible for separating the audio and video components of audio/video information. (7:6-10; 7:30-33.) Both the time encoder 114 and the compression means 115/116, which follow converter 113, operate on separated audio-only and video-only streams. (8:16-19; 8:67-10:16.) "Time encoding allows [subsequent] realignment of the audio and video information in the compressed data formatting section **117** after separate audio and video compression processing by precompression processor **115** and compressor **116**." (8:2-6.) This separate processing of audio and video information is clearly shown in figure 2a. Neither the time encoder 114 nor the compression means 115/116 will work if the information is not first separated into audio-only and video-only streams. This is an additional reason the converter 113 must be located in between the identification encoder and the time encoder, exactly where it is placed in the only disclosed embodiment.

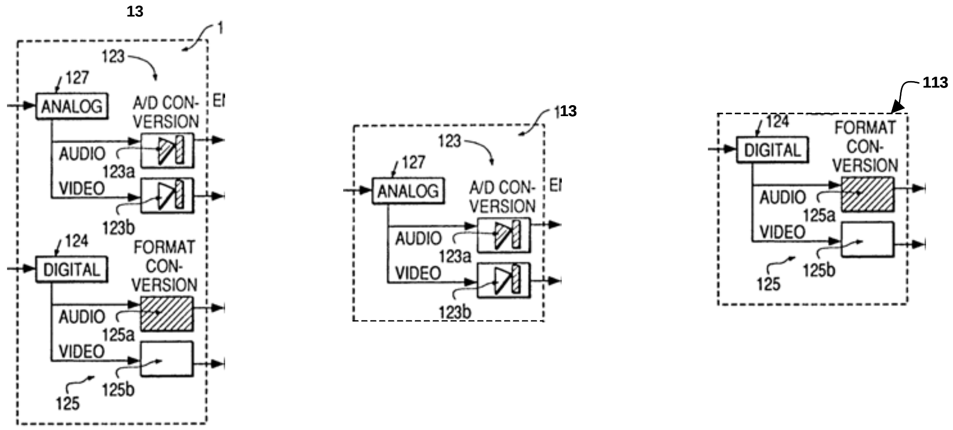
In summary, converter 113 (i) places the information retrieved from the source material library into a single predetermined format that can be recognized by the components which follow it; and (ii) creates separate audio-only and video-only streams, as required by the time encoder 114 and compression means 115/116. The converter must therefore be directly connected to and immediately follow the identification encoder (which retrieves the information from the source material library). None of the other components of the transmission system will work otherwise.

While the existence of a converter 113 and its placement immediately following the identification encoder are both essential, in general any one of three different types of optional converters can be employed: 1) an analog-only converter, for use when the information stored on the items in the source material library is always analog; 2) a digital-only converter, for use when the information stored on the items in the source material library is always digital; and 3) a converter that handles both analog and digital information, as depicted in figure 2a. The specification states:

> The items stored in source material library **111** and encoded by identification encoder **112** may be in either analog or digital form. Converter **113** therefore includes analog input receiver **127** and digital input receiver **124.** *If items have only one format, only one type of input receiver **124** or **127** is necessary.* (Col. 6: 62-68) (emphasis added.)

Each of these three implementations of converter 113 is depicted below:

**Analog and Digital Implementation** | **Analog-only Implementation** | **Digital-only Implementation**



13
123
127
ANALOG
A/D CON-
VERSION
AUDIO
123a
VIDEO
123b
124
DIGITAL
FORMAT
CON-
VERSION
AUDIO
125a
VIDEO
125b
125
113
123
127
ANALOG
A/D CON-
VERSION
AUDIO
123a
VIDEO
123b
113
124
DIGITAL
FORMAT
CON-
VERSION
AUDIO
125a
VIDEO
125b
125

FIGURE B

Unless a claim limits the type of converter to be used, any one of these three implementations would be covered by the converter component of a "transmission system."

**(iv) "time encoder" 114**

"Time encoding by time encoder **114** makes itmes [sic] and subsets of items retrievable and addressable throughout the transmission system **100**." (8:50-52.) "[S]ystem addressing of particular data bytes, and user addressing of particular portions of items are all made possible through time encoding." (8:20-23.) Because, without the time encoder, it would not be possible to address and retrieve requested data blocks for transmission to the user, the time encoder is an essential component of the patentee-defined transmission system.[6]

As described in section I(A)(iii) above, time encoder 114 is only capable of operating on audio-only and video-only streams that are in a predetermined format. Therefore, the time encoder must be placed after the converter 113, which creates these streams. In addition, the time codes must be assigned to the separate audio and video streams prior to compression by compression means 115/116 (described in the next section), because (i) it is the prior assignment of time codes that permits realignment of audio and video data after they are separately compressed (8:2-6; 8:20-23); and (ii) it is the prior assignment of time codes that permits compression to occur in the time dimension. (8:52-55.) Therefore, it is essential that the time encoder 114 be placed exactly where it shown in figure 2 - immediately after the converter 113 and immediately before the compression means 115/116. The specification does not describe any other location for the time encoder in the "transmission system."

**(v) "precompression processor" 115 and "compression processor" 116**

Compression, and storage in compressed form, are essential aspects of the "transmission system." As the specification says, "[p]rior to being made accessible to a user of the transmission and receiving system of the present invention, the item **must** be stored in at least one compressed data library **118**." (6:35-38) (emphasis added.) Obviously, information must be compressed before it can be stored in a compressed data library.

---

[6] As previously explained by the Round 3 defendants, however, sequencing other than by time would also permit retrieval of requested data blocks. However, sequencing with time encoder 114 is the only form of sequencing disclosed in the specification.

Compression is performed by both the precompression processor 115 and the compression processor 116 (7:46-47; 8:5-6; 8:57-62), and the specification is clear that the compression processor 116 "requires" preprocessing by precompression processor 115. (8:67-9:2.) Therefore, the tandem of precompression processor 115 and compression processor 116 (the "compression means") are essential components of the transmission system.

It is also essential that the compression means be placed precisely where it is placed in the only embodiment disclosed in the specification - in between the time encoder 114 and the compressed data storage means 117/118. For the reasons discussed in sections I(A)(iii) and (iv) above, the compression means must be placed after the time encoder, and it is self evident that the information must be compressed before it can be stored in compressed form in a compressed data library.

**(vi) "compressed data formatter" 117 and "compressed data library" 118**

As described above, the specification unambiguously states that storage of information in compressed form is mandatory. (6:35-38.) Both the compressed data formatter 117 and compressed data library 118 are required to perform this storage. Before an audio/video item can be stored for access by a user, its audio and video constituents (which were separated by converter 113 for processing by time encoder 114 and compression means 115/116) must be realigned. Compressed data formatter 117 performs this function. (8:2-6.) Moreover, the compressed data formatter 117 organizes all of the information relating to the item requested by the user as a single file for storage in the compressed data library 118. (10:23-30.) This is the reason the patentees collectively referred to compressed data formatter 117 and compressed data library 118 as the "compressed data storage means." (10:25-26 and 10:34-39.) For all of these reasons, the tandem of compressed data formatter 117 and compressed data library 118 are essential components of the transmission system defined by the patentees in the specification.

It is also essential that the "compressed data storage means" be placed precisely where it is placed in the only embodiment disclosed in the specification - after the compression means 115/116 and before the transmitter means 119/122. It is common sense that information must be compressed before it can be stored in a compressed form, and that it must be stored before it can be retrieved from storage for transmission to a requesting user.

While the existence and placement of compressed data formatter 117 and compressed data library 118 are essential, however, compressed data library 118 can consist of one or more than one compressed data libraries. (10:50-54.) This optional implementation is reflected in Figure A above with the depiction of multiple optional additional libraries.

**(vii) "transmission format conversion CPU" 119 and "transmitter" 122**

Transmission of information to a user after processing and storing are completed is an essential aspect of the disclosed transmission system. Without it, the system has no practical use. Thus, it is essential that the last component of the patentee-defined transmission system be the transmitter means.

The transmitter means disclosed consists of two components - a transmission format conversion CPU 119, which "converts the compressed formatted data block into a format suitable for transmission" (that is, formats it for the specific type of communication channel to be used) (col. 13:40-45; *See also* 15:55-57; 15:67-16:3), and the transmitter 122 itself. Because information cannot be transmitted if it is not in “a format suitable for transmission,” both components 119 and 122 operating in tandem are essential to the transmission system. This is why the patentees themselves referred to the combination of these two components as the “transmitter means.” [*See* Original Claims as filed with the application for U.S. Patent No.5,132,992 (Block 05/18/2007 Decl., Exh. 1, Docket No. 238-2)] (Originally filed claim 2 states that the “transmission format means” is part of the “transmitter means.”)

The specification discloses that the transmission system permits information to be sent to users over many different types of communication channels (each of which requires a particular type of transmit format conversion CPU 119 and transmitter 122). Indeed, the patentees described one of the important features of their transmission system to be its ability to transmit over whatever communication channel is available at the time:

> **The transmission and receiving system of the present invention preferably operates with any available communication channels.** Each channel type is accessed through the use of a communications adaptor board or processor connecting the data processed in the transmission format converter **119** to the transmission channel (15:65-16:3) (emphasis added.)
>
> **In a preferred embodiment of the present invention, many forms of communication channels may be employed.** Distribution of information is by common carrier communication channels whenever possible. These channels include common telephone service, ISDN and Broadband ISDN, DBS, cable television systems, microwave, and MAN. (16:62-68) (emphasis added.)

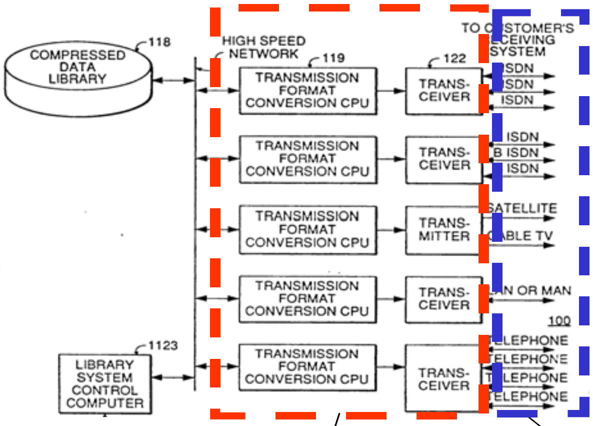
The patentees considered the ability of their transmission system to support multiple communication channels to be so important that it is the first stated object of the invention:

> It is therefore an object of the present invention to provide a user with the capability of accessing audio/video material by integrating both accessing and playback controls into **a system that can use multiple existing communications channels.** (1:57-61) (emphasis added.)

In order to support these many different channel types, the preferred (and only) embodiment contains many different outport ports, so that the transmission system can use whatever type of communication channel is available at the time of transmission:

> **In order to serve a multitude of channel types**, a preferred embodiment of the present invention includes a **multitude of output ports of each type** connected to one or more computers on the transmission and receiving system. (16:16-20) (emphasis added.)

Thus, while availability and use of any specific channel type is optional, the specification is clear that the equipment necessary to support each of these channel types is not optional. The essential transmitter means components and the optional channel types are depicted below:[7]



COMPRESSED DATA LIBRARY
118
HIGH SPEED NETWORK
119
122
TRANSMISSION FORMAT CONVERSION CPU
TRANS-CEIVER
TRANS-MITTER
ISDN
B ISDN
CABLE TV
100
LIBRARY SYSTEM CONTROL COMPUTER
1123

MANDATORY OPTIONAL

FIGURE C

---

[7] Of course, at least one common access line must be present in a transmission system.

**(viii) "library system control computer" 1123 and "library access interface" 121**

The capability of the disclosed transmission system to receive and comply with user requests for specific information to be played back at a user-specified time and place was repeatedly described by the patentees as the essential capability which distinguished their system from prior art systems of delivering information to users. The very first sentence of the specification emphasizes the importance of this capability:

> The present invention relates generally to an audio and video transmission and receiving system, **and more specifically to such a system in which the user controls the access and the playback operations of selected material.** (1:6-10) (emphasis added.)

The patentees described their invention in similar terms in the Petition to Make Special:

> The present invention is directed to an audio and video transmission and receiving system in which the user controls the access and the playback operations of selected material. The present invention affords the user greater access to and control over audio and video information than is possible in conventional systems. With the present invention, a user can request audio and video information to be sent to a selected destination. Further, the user is not constrained to having programs played at a particular time. . . [Petition to Make Special at 2 (Benyacar 05/08/2006 Decl., Exh. B, Docket No. 161-3.)]

Each of the prior art references discussed in the patent is distinguished based on its inability to accommodate user control of when and/or where selected content is played (1:8-56.) Every stated object of the invention relates to complying with user requests for information or processing user-requested information (1:57-2:15), and every disclosed method calls for transmission from the transmission system to the reception system in response to a user request. (2:49-61; 18:46-59; figure 7.) Indeed, the specification does not describe any way of determining what to transmit other than transmitting information selected by a user making a request to the transmission system. Thus, the ability to receive and comply with user requests for information is essential to the alleged invention, and the components of the transmission system responsible for receiving and complying with user requests are therefore essential components of a transmission system.

While different "access methods" are described in the specification (user requests sent directly to the transmission system and indirectly to the transmission system via a remote order processing system), all disclosed access methods use the "library access interface" 121 and the "library system control computer" 1123:

> The library access interface **121** receives transmission requests either directly from the users or indirectly by remote order processing and item database **300**. (13:37-40.)
>
> In a preferred embodiment of the present invention, customer access of an item stored in compressed data library **118** via the library access interface **121** may be performed in various ways. (13:48-51.)
>
> All transmission requests from the access methods are placed into a transmission queue managed by the library system control computer **1123**. (15:33-35.)

"Library access interface" 121 and "library system control computer" 1123 are therefore essential components for handling user requests.

The library system control computer "controls the distribution of the requested items to the reception system **200** of the user." (15:36-37.) This includes control of the compressed data library and the placement of information on a specific distribution channel(s). (15:33-54.) Thus, just as is depicted in figure 2, the library system control computer must be directly connected to both the compressed data library and to each of the transmission format conversion CPUs.

User requests for information are passed directly or indirectly to library access interface 121. However, the specification is unclear as to whether library access interface 121 is in the transmission system or the reception system. The Round 3 defendants previously argued, and the specification states (17:44-46), that it is in the reception system. Wherever it is, though, it is a required component that must send the user requests to the library system control computer 1123 which manages these requests (15:23-27), and thus must be connected to the library system control computer as depicted in figure 2b.[8]

**B) Construction of "transmission system"**

**(i) basic transmission system**

All of the asserted method claims of the '992, '275 and '863 patents contain steps which must be performed by, on or with a "transmission system." (3rd CCO at 5, 29, 34, 37; 4th CCO at 5-6; 7/21/06 Stipulation (Docket No. 187).) The basic transmission system is therefore a limitation of all of these claims. The Court should provide a base construction of "transmission system" which applies to *all* of the claims as follows:

> the transmission system of the present invention as described in the specification, comprising all necessary components to perform each step required to be performed by, on or with a transmission system. Every claim requires that the transmission system have the following components directly interconnected in the order identified:
>
> a source material library (element 111 of Fig. 2a);
>
> an identification encoder (element 112 of Fig. 2a);

---

[8] Thus, if the Court determines that the library access interface 121 is in the receiving system instead of the transmission system, it should conclude that it is an essential element of the receiving system and include it in the base construction of "receiving system."

a converter (element 113 of Fig. 2a);

a time encoder (element 114 of Fig. 2a);

a precompression processor (element 115 of Fig. 2a);

a compressor (element 116 of Fig. 2a);

a compressed data formatter (element 117 of Fig. 2a);

a compressed data library (element 118 of Fig. 2b);

transmission format conversion CPUs (elements 119 of Fig. 2b);

transceivers and transmitters (elements 122 of Fig. 2b).

> The transmission system also includes a library system control computer (element 1123 of Fig. 2b) directly connected to both the compressed data library and to the transmission format conversion CPUs, and a library access interface (element 121 of Fig. 2b) directly connected to the library system control computer.[9]

'992 claims 19, 22, 41, 45 and 46, '275 claims 2 and 5 and '863 claims 14-19 are not limited specifically to any of the optional implementations of converter 113, compressed data library 118 or "common access lines."[10] The Court should therefore add the following additional language to its construction of these claims to indicate that all of the disclosed implementations of those components are covered by those claims:

---

[9] As explained above, the specification is clear that interconnected components 111-119 and 122 are essential (i.e. not described as optional) components of the patentee-defined "transmission system" - no reference to specific claim steps is required. In addition, as demonstrated in Appendix A, all of these components are *also* necessary to perform the specific claim steps that must be performed by, on or with a "transmission system." The latter is not true of components 121 and 1123. '992 claims 41-45 and '863 claims 14-19 do not require user requests, and therefore on their face do not require components 121 and 1123. These two components are nonetheless included in the construction of "transmission system" in these claims because the specification describes them as essential. *See* Section I(A)(viii) *supra*.

[10] Appendix A contains the analysis of each individual claim.

> The converter **113** must include (a) digital input receiver **124** and formatter **125** (which includes a digital audio formatter **125*a*** and a digital video formatter **125*b***); OR (b) analog input receiver **127** and analog-to-digital converter **123** (which includes analog audio converter **123*a*** and analog video converter **123*b***)*;* OR (c) both the components identified in (a) and the components identified in (b).
>
> The compressed data library can include a single compressed data library or multiple compressed data libraries.

**(ii) claims limited to optional implementations of the transmission system**

**(a) '992 claim 20**

'992 claim 20 requires both analog and digital inputs to the converter 113. Consequently, the Court should add the following additional language to its construction of that claim:

> The converter **113** must include BOTH (a) digital input receiver **124** and formatter **125** (which includes a digital audio formatter **125*a*** and a digital video formatter **125*b***); AND (b) analog input receiver **127** and analog-to-digital converter **123** (which includes analog audio converter **123*a*** and analog video converter **123*b***.)
>
> The compressed data library can include a single compressed data library or multiple compressed data libraries.

**(b) '992 claim 21**

'992 claim 21 requires that the compressed data library include more than one compressed data library. Consequently, the Court should add the following additional language to its construction of that claim:

> The converter **113** must include (a) digital input receiver **124** and formatter **125** (which includes a digital audio formatter **125*a*** and a digital video formatter **125*b***); OR (b) analog input receiver **127** and analog-to-digital converter **123** (which includes

analog audio converter **123*a*** and analog video converter **123*b***)*;* OR (c) both the components identified in (a) and the components identified in (b).

The compressed data library must include multiple compressed data libraries.

**(c) ’992 claim 42**

‘992 claim 42 requires an analog input to the converter 113, but the existence of a digital input is optional. Consequently, the Court should add the following additional language to its construction of that claim:

> The converter **113** must include at least analog input receiver **127** and analog-to-digital converter **123** (which includes analog audio converter **123*a*** and analog video converter **123*b***.)
>
> The compressed data library can include a single compressed data library or multiple compressed data libraries.

**(d) ’992 claims 43-44**

‘992 claims 43-44 require a digital input for the converter 113, but the existence of an analog input is optional. Consequently, the Court should add the following additional language to its construction of that claim:

> The converter **113** must include at least digital input receiver **124** and formatter **125** (which includes a digital audio formatter **125*a*** and a digital video formatter **125*b***.)
>
> The compressed data library can include a single compressed data library or multiple compressed data libraries.

**(e) summary of claims**

A table summarizing the construction of “transmission system” applicable to each of these claims appears below:

| CLAIMS | CONSTRUCTION |
|---|---|
| All claims | Require the "basic" transmission system described above. This basic transmission system includes components 111-119 and 122 of figure 2 directly connected in numerical order, component 1123 directly connected to both the compressed data library 118 and the transmission format conversion CPUs 119, and component 121 directly connected to component 1123. |
| '992 claims 19, 22, 41, 45-46; '275 claims 2 and 5; '863 claims 14-19 | The transmission system can contain any one of the options for converter 113, compressed data library 118 and "common access lines" described in sections I(A) (iii), (vi) and (vii). |
| '992 claim 20 | The transmission system must contain the converter 113 which has both analog and digital inputs, described in section I(A)(iii). The transmission system can contain any one of the options for compressed data library 118 and "common access lines" described in sections I (vi) and (vii). |
| '992 claim 21 | The compressed data library 118 of the transmission system must contain a plurality of compressed data libraries. The transmission system can contain any one of the options for converter 113 and "common access lines" described in sections I (iii) and (vii). |
| '992 claim 42 | The transmission system must contain a converter 113 which has an analog input. The transmission system can contain any one of the options for compressed data library 118 and "common access lines" described in sections I (vi) and (vii). |

| CLAIMS | CONSTRUCTION |
|---|---|
| '992 claims 43-44 | The transmission system must contain a converter 113 which has a digital input. The transmission system can contain any one of the options for compressed data library 118 and "common access lines" described in sections I (vi) and (vii). |

## II) RECEIVING SYSTEM

As it did with respect to "transmission system," the Court requested that the parties brief which components of the disclosed "receiving system" are essential.[11] (5th CCO at 14.) We provide a description of the essential components of the basic receiving system in Section II(A) below. Appendix B contains the claim charts requested by the Court identifying which components of the disclosed receiving system are necessary to perform each of the claim steps required to be performed by, on or with a receiving system. Section II(B) contains the construction of "receiving system" for these claims.

Before turning to that analysis, however, there are a number of essential functions of a "receiving system" that cannot be performed by the disclosed receiving system, since there are no components described in the specification or depicted in figure 6 which perform these functions. Essential functions which cannot be performed by the disclosed receiving system include (but are not limited to) the following:

---

[11] The Court has previously construed the terms "reception system" and "receiving system" to have the same meaning. (3rd CCO at 8-11.) Therefore, the analysis herein with respect to the claim term "receiving system" applies equally to the claim term "reception system."

> 1) "The reception system **200** has playback controls similar to the controls available on a standard audio/video recorder. These include: play, fast forward, rewind, stop, pause, and play slow." (17:35-38.) There are no components described in the specification or depicted in figure 6 which allow such playback control;
>
> 2) There are no components described or depicted in figure 6 to control retrieval of information from storage 203. For example, there are no components in the reception system to instruct storage 203 which information is to be retrieved or when;
>
> 3) A reception system must be capable of confirming receipt of the information sent to it, either by sending a message back to the transmission system or by answering a call placed to it by the transmission system. (17:1-24.) There are no components described in the specification or depicted in figure 6 which perform such reception confirmation procedures;
>
> 4) Receiving systems must be capable of determining if information has been copy protected and, if so, prevent copying by the user. (5:46-58; 17:28-34.) There are no components described in the specification or depicted in figure 6 which either detect if information from the transmission system is copy protected or prevent the user from copying information which is copy protected.

For these and other reasons, the claim terms "receiving system" and "reception system" lack written description, are not enabled and otherwise fail to satisfy the requirements of 35 U.S.C. § 112. As with "transmission system," the Round 3 defendants will make appropriate § 112 motions during the period designated for such motions by the Court.

**A) Essential Interconnected Components of the Patentee-Defined "receiving system"**

**(i) "transceiver" 201**

"The reception system **200** includes transceiver **201** which receives the audio and/or video information transmitted by transmitter **122** of the transmission system **100**." (18:3-6.) Since the transceiver is the component that receives the information sent from the transmission system, it is the essential first component of the receiving system.

**(ii) "receiver format converter" 202**

The receiver format converter 202 converts the received information into "a format suitable for storage and processing" as well as "a format suitable for playback by the user in real time." (3:3-7; 18:9-13.) Since the information cannot be stored, processed or played back until it is formatted, the receiver format converter 202 is an essential component of the receiving system which must be placed immediately after the transceiver 201 so that the information can be formatted as soon as it is received (until it is formatted, nothing can be done with it.)

**(iii) "storage" 203**

A user can indicate in his request to the transmission system for information that he wishes playback of the requested information at a designated time later than the time when the request is made. If the user does include a later playback time in that request, the information will be sent by the transmission system to the receiving system and stored in storage 203 until the time designated by the user in his request. (18:14-21.) Thus, it is storage 203 that enables the user to view his selection at the time he selected when ordering. Because, as described above, this is an essential aspect of the invention, storage 203 is an essential aspect of the receiving system.[12]

---

[12] Although the specification alludes to a "non-buffering" receiving system (4:34), the specification does not describe the components of such a receiving system. In any event, the issue of whether storage device 203 is described in the specification as an essential component of a receiving system need not actually be decided, as every asserted claim which calls for steps to be performed by, on or with a receiving system affirmatively requires that the receiving system store the information.

Storage 203 must also immediately follow receiver format converter 202, as storage of information in compressed form is an important aspect of the receiving system. For example, the patentees distinguished the prior art Walter reference in the Petition to Make Special:

> Walter shows memory module 102 in the data receiving system 14, but there is no indication in Walter that compressed data is stored in memory module 102. Because non-compressed data is stored in the memory module, the user is limited as to the quantity of data which may be stored therein. [Petition to Make Special at 10 (Benyacar 05/08/2006 Decl., Exh. B, Docket No. 161-3).]

**(iv) "data formatter" 204**

"When playback is requested, the compressed formatted data blocks are sent [from storage 203 to] data formatter **204**. Data formatter **204** processes the compressed formatted data blocks and distinguishes audio information from video information." (18:22-26.) The audio and video information must be separated prior to decompression, as decompressor 205 operates on separate audio-only and video-only streams. (18:27-29; Fig. 6.) Thus, the data formatter 204 must be placed after storage 203 and before decompressor 205, exactly as depicted in figure 6 (the only receiving system described in the specification.)

**(v) "decompressor" 205**

The signals from the receiving system are "output to a playback system such as a TV or audio amplifier. They may also be sent to an audio/video recorder of the user." (18:36-38.) The decompressor must therefore be placed before the audio and video output converters, as televisions, audio amplifiers and audio/video recorders cannot reproduce compressed information. The information must be decompressed before it leaves the receiving system.

**(vi) output converters 211-214**

After decompression, "[t]he decompressed video data is then sent simultaneously to converter **206** including digital video output converter **211** and analog video output converter **213**. The decompressed audio data is sent simultaneously to digital audio output converter **212** and analog audio output converter **214**. The outputs from converters **211-214** are produced in real time." (18:29-35.) The information is simultaneously sent to a variety of different types of output ports so that the receiving system can be connected to a number of different types of devices depending on the user's needs. (18:36-45.) The patentees did not disclose an embodiment that does not include these output converters. Thus, output converters 211-214 are essential components of every receiving system.

In addition, figure 6 depicts an unnumbered output for compressed data which is not described in the specification. Because there is no indication that this component is optional, it must be included in the construction of "receiving system."

**(vii) "user/computer interface" 207**

The specification does not refer to the "user/computer interface" 207 depicted in figure 6, although it does mention "specialized interfaces built into the reception system **200** for the user." (14:66-67.) As with the depiction of the output for compressed data, the lack of corresponding explanation in the specification of the "user/computer interface" component of the receiving system puts the Court and the defendants at a disadvantage in attempting to construe claims which require steps to be performed by, on or with a receiving system. Nonetheless, the inclusion of "user/computer interface" 207 in figure 6 requires that it be included in the construction of "receiving system."

**B) Construction of "receiving system"**

'992 claim 19, '275 claims 2 and 5 and '863 claims 14 and 17 contain steps required to be performed by, on or with a receiving system. The specification does not describe any components of the receiving system as optional. Therefore, the Court should construe "receiving system" in these claims to mean the basic receiving system described in Section II(A):

> the receiving system of the present invention as described in the specification, comprising all necessary components to perform each step required to be performed by, on or with a receiving system. With respect to '992 claim 19, '275 claims 2 and 5 and '863 claims 14 and 17, a receiving system must include the following components, directly interconnected in the order identified:
>
> a transceiver (element 201 of Fig. 6);
>
> a receiver format converter (element 202 of Fig. 6);
>
> storage (element 203 of Fig. 6);
>
> a data formatter (element 204 of Fig. 6);
>
> a decompressor (element 205 of Fig. 6);
>
> a converter (element 206 of Fig. 6). The converter must include a separate digital video output converter (element 211 of Fig. 6), analog video output converter (element 213 of Fig. 6), digital audio output converter (element 212 of Fig. 6), analog audio output converter (element 214 of Fig. 6), and an output for compressed data (unnumbered element labeled "compressed" in Fig. 6); and
>
> a user/computer interface (element 207 of Fig. 6.)[13]

---

[13] As explained above, the specification is clear that interconnected components 201-206 are essential components of the patentee-defined "receiving system" - no reference to specific claim steps is required. In addition, as demonstrated in Appendix B, all of these components are *also* necessary to perform the specific claim steps that must be performed by, on or with a "receiving system." The latter is not true of component 207 and the compressed output. These two components are nonetheless included in the base

(continued...)

## CONCLUSION

For the reasons described herein and in the accompanying Appendix A and B, the Court should construe "transmission system" as set forth in Section I(B) above and "receiving system" as set forth in Section II(B) above. In addition, although the Court indicated that it intends to defer its construction of these terms "until the Court is called upon to determine whether an alleged infringer is using a 'transmission system'" (5th CCO at 13 n.12), the Round 3 defendants respectfully request that the Court not wait until the infringement stage of this action to issue its constructions. The Court indicated at the August 17, 2007 hearing that after claim construction is completed, the parties should begin filing dispositive motions. The Court's construction of

[13] (...continued)
construction of "receiving system" because they are in the only embodiment disclosed in the specification, and are not described as being optional.

"transmission system" and "receiving system" will give rise to, and will be relevant to, these dispositive motions.

Respectfully submitted,

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